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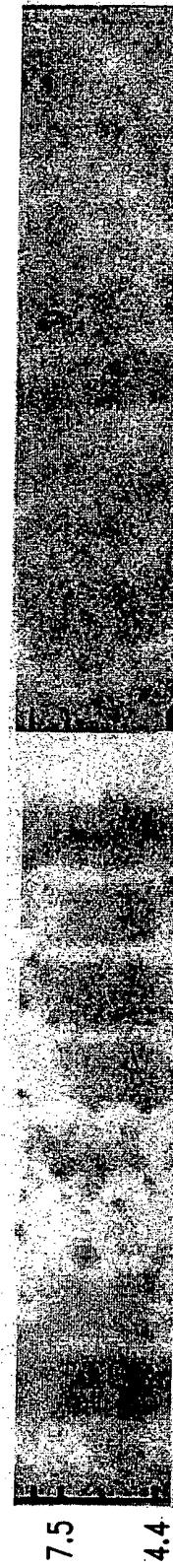
Title: DSP-4 DUAL-SPECIFICITY PHOSPHATASE

Express Mail No. EV348169729US

Inventor(s): Ralf M. Luche and Bo Wei Serial No. 09/544,517 Docket No. 200125.410

### DSP-4

#### • Northern blot analysis



- He = Heart
- Br = Brain
- Pl = Placenta
- Lu = Lung
- Li = Liver
- SM = Skel. Muscle
- Ki = Kidney
- Pa = Pancreas
- Sp = Spleen
- Th = Thymus
- Pr = Prostate
- Te = Testis
- Ov = Ovaries
- Sl = Small Intestine
- Co = Colon
- PB = Periph. Blood

Fig. 4



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DSP4, ENCODED BY 651 BASE PAIRS

ACATTGCATC CCTGGGATAA ACGGACCTGG ACAACTCACT CTCTTGGTCT GTGGCTGCTG CGGTTACCTG GATGGGCAGA CACCTCTGAG  
GCTGGCTTG TTACCTGGGC AATAAGGGAC TAGCAGTTCA GCCGTTTCT ATGCCTGCTG GATTTGTTTG TATTTGTTCC CAGCCACTGC  
TCATGTAATG TACTCCCTTA ACCAGGAAAT TAAAGCATT C TCCCGGAATA ATCTCAGGAA GCAATGCACC AGGGTGACAA CGCTAACTGG  
AAAGAAAATT ATAGAAACAT GGAAAGATGC CAGAATTAT GTTGTGGAAG AAGTAGAGCC GAGCAGTGGG GGTGGTTGTG GTTATGTGCA  
GGACCTTAGC TCGGACCTGC AAGTTGGCGT TATTAAGCCA TGGTTGCTCC TAGGGTCACA AGATGCTGCT CATGATTTGG ATACACTGAA  
AAAGAATAAG GTGACTCATA TTCTTAATGT TGCAATATGGA GTTGAAGAATG CTTTCCTCAG TGACTTTACA TATAAGAGCA TTTCTATATT  
GGATCTGCCT GAAACCAACA TCCGTCTTA TTTTCCAGAA TGTTTGAAAT TTATTGAAGA AGCAAAAAGA AAAGATGGAG TGGTTCTGT  
TCATTGTAAT GCAGGCCTT CCAGGGCTGC TGCAATTGTA ATAGGTTCC TGATGAATT TGAAACAAACC TCATTTACCA GTGCTTTTC  
TTTGGTGAAAT AATGCAAGAC CTTCCATATG TCCAAATTCT GGCTTCATGG AGCAGCTTCG TACATATCAA GAGGGCAAAG AAAGCAATAA  
GTGTGACAGA ATACAGGAGA ACAGTTCATG AGTTGCATTG TAGCAGACAA TGAGACAATG TAGTTTCTGA ATGGACTTCT ATAGCCATCT  
TTTCCCTTT TTGGAGAGTA GACTAGAAA ACTCCCTTT TTCTCTTGCC TTTTTATGC ATAAATGGAG GTCAATCTGA TTGTCCTGAC  
CTACTGTATA AGTAAATTTC AAATGTCATT ACTTCTCTT TGTTTATAA ATGTGTGATT AAATGCTTT TTAAATTGCT AAGGGAAAAT  
AAAAAAAAA

*Fig. 1*

TRANSLATED, 217 AMINO ACIDS

MYSLNQEIKAFSRNNLRKQCTRVTTLGKIIETWKDARIHVVEEVEPSSGGCCGYVQDLSSDLQVGVIKPWL  
LLGSQDAAHDLDTLKKNKVTHILNVAYGVENAFLSDFTYKSISILDLPETNILSYFPECFIEEAKRKDGVV  
LVHCNAGVSRAAIIVGFLMNSEQTSFTSAFSLVKNARPSICPNSGFMEQLRTYQEGKESNKCDRIQENSS

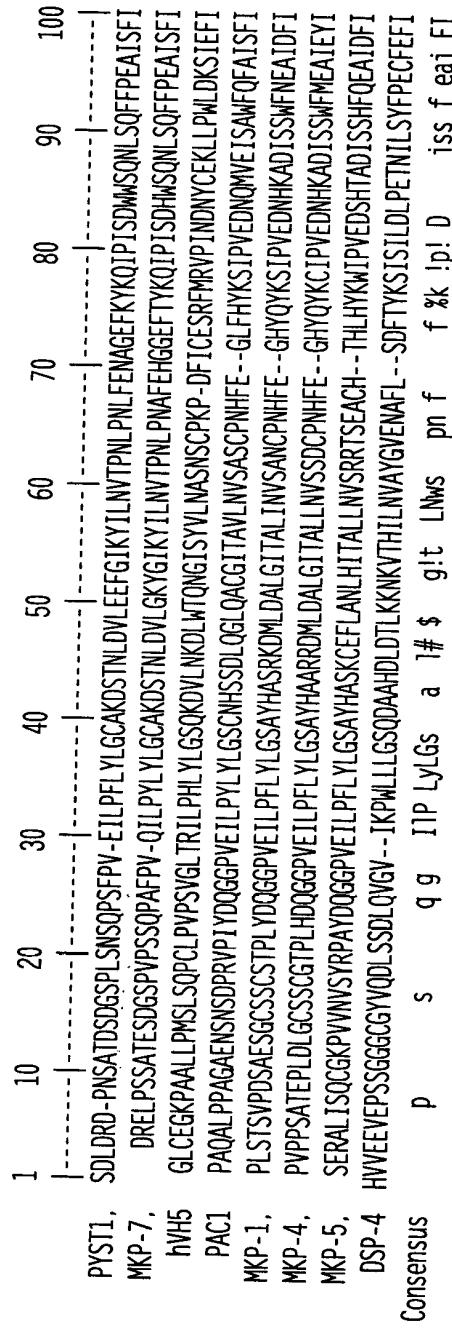
*Fig. 2*



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PYST1, DEARGKNCGVLWHCLAGISRSVTVTVAIYLMQKLNLNSMNDAYDIVKWKKSNTSPNFWNGQLLDFFRTGLSS  
 MKP-7, DEARSKKCGVLWHCLAGISRSVTVTVAIYLMQKLNLNSMNDAYDFVKRKKSNTSPNFWNGQLLDFFRTGLSS  
 hVH5, DIAKLSSCAVIVHCLAGISRSATIATAYIMKTMGMSDADYRFIKORRPSIISPNFNFQNGQLLDFFRTGLSS  
 PAC1, DSVKNSGGRVLVHCOAGISRSATIATAYIMKTMGMSDADYRFIKORRPSIISPNFNFQNGQLLDFFRTGLSS  
 MKP-1, DSTKNAAGRVRVHCOAGISRSATIATAYIMKTMGMSDADYRFIKORRPSIISPNFNFQNGQLLDFFRTGLSS  
 MKP-4, DAWKDCRGRVLVHCOAGISRSATIATAYIMKTMGMSDADYRFIKORRPSIISPNFNFQNGQLLDFFRTGLSS  
 MKP-5, DCVREKGKGVVLVHCEAGISRSPTGICAYLMKTKQFRKEAFDYLKQFRKEAFDYLKQFRKEAFDYLKQFR  
 DSP-4, EEAKRKDGAVLWHCNAGISRSAAATIVGLMSEQTTSFSAFLVKNARPSICPNSGFMEQLRTYQEKGKESNKGDR  
 Consensus: # ak k g VIVHC AG:SRsat! a%in s A% f!K rr !SPNF F\$gQI y#

Fig. 3